

AMENDMENTS TO THE SPECIFICATIONS

Please replace the following paragraphs entitled "Summary of the Invention" located on pages 4, 5 and 6 of the Specification, with the following paragraphs rewritten in amendment format:

Summary of the Invention

~~Apparatus for movement of the human lower limbs passively in specified~~ Specific
embodiments according to the invention provide an apparatus for movement of the
human lower limbs passively in specified pre-determined anatomical directions in order
to increase or maintain a range of motion (ROM) of the hip joint is provided. A
stretching force is applied in a controlled manner to stretch soft tissue structures,
particularly the muscles that cross, or extend to/from the hip joint. ~~A means of~~
~~measuring the angle moved by the cradle supporting each limb is provided to enable~~
~~the apparatus to be used for orthopaedic assessment and monitoring. A clamping~~
~~means is provided to position and hold the subject's pelvis to isolate the hip joint during~~
~~stretching.~~ Controlled positioning and stabilisation of the lower limbs allows the subject
to perform appropriate stretching regimes either unassisted or as directed by a
therapist.

The stretching apparatus comprises two limb cradles, each arranged to fit
independently movable and each arranged to fit under a subject's leg to support the leg.
Preferably, each cradle connects to a cradle movement means having two pivots each
defining an axis of rotation and providing for movement of the cradle through two planes
of movement transverse to each other, and preferably orthogonal. Preferably a handle
is provided for manual operation, but optionally movement of each cradle may be

~~powered by an electric motor or may be servo assisted. Each cradle is hinged at the hip and knee joints and is fitted with straps to secure the leg above and below the knee (preferably above the ankle). Each cradle is fully adjustable in terms of cradle length and width between the cradle movement means to accommodate for a wide variety of leg length and pelvic dimensions. The apparatus is therefore, capable of fitting and supporting adults and juniors through a wide range of dimensions.~~

~~Each cradle connects to a cradle movement means having two pivots each defining an axis of rotation and providing for movement of the cradle through two planes of movement transverse to each other, and preferably orthogonal. The movement transverse to each other, and preferably orthogonal. The movement means may be controlled by a user to actuate movement of the cradle. A handle is provided for manual operation, but optionally movement of each cradle may be powered by an electric motor or may be servo assisted.~~

~~By providing two cradles the position of both resting leg and stretching leg can be carefully controlled. which can be moved independently and which are configured to move in either the same plane or a different plane to each other, the position of both the resting leg and stretching leg can be carefully controlled. It is advantageous to fix the resting leg and pelvis of the subject during stretch of the stretching leg as this allows for quantitative comparisons of the relative degree and extent of stretch between the two legs. By providing a means to lock each cradle in a neutral position of 0° hip flexion and by providing straps to maintain the leg in this position, the tendency of the resting leg to rise during flexion stretching of the contralateral leg can be eliminated.~~

According to a first one aspect of the present invention, there is provided a stretching apparatus for use in stretching the lower limbs of a human subject said apparatus comprising:

~~at least one cradle~~ first and second cradles each independently movable and each configured to support a leg, or part thereof, of said subject, each said cradle being

movable between a corresponding respective non-stretching position and a corresponding respective stretching position; and

at least one cradle movement means operable to independently move each said cradle between said non stretching and stretching positions, said at least one cradle movement means comprising:

~~wherein said cradle movement means comprises:~~

first movement means configured to ~~move~~ rotate each said cradle ~~through a~~ in a corresponding respective first plane of movement; and

second movement means configured to rotate each said cradle ~~through a~~ in a corresponding respective second plane of movement transverse to a said first plane of movement.

Other aspects of the invention are as recited in the claims herein.

Please delete the following paragraphs located on pages 6, 7, 8 and 9 of the specification:

~~According to a second aspect of the present invention there is provided a stretching apparatus for use in stretching the lower limbs of a human subject comprising:~~

~~at least one cradle configured to support a leg, or part thereof, of said subject, said cradle moveable between a non-stretching position and a stretching position, in use said cradle thereby positioning said leg, or part thereof, in said non-stretching and stretching positions respectively; and~~

~~at least one cradle movement means operable to move said cradle between said non-stretching and stretching positions, in use said cradle movement means thereby moving said leg, or part thereof, between said non-stretching and stretching positions;~~

~~wherein said cradle movement means comprises:~~

~~first movement means configured to move said cradle through a first plane of movement for performing a first set of stretches; and~~

~~second movement means configured to rotate said cradle through a second plane of movement transverse to said first plane of movement for performing a second set of stretches.~~

~~According to a third aspect of the present invention there is provided a stretching apparatus for use in stretching the lower limbs of a human subject comprising:~~

~~a support table configured to support said subject's back and upper body in supine position; and~~

~~at least one cradle extending from one end of said table, said cradle configured to support a leg, or part thereof, of said subject, said cradle moveable between a non-stretching and stretching positions,~~

~~at least one cradle movement means operable by said subject from said supine position to move said cradle between said non-stretching and stretching positions,~~

~~wherein said cradle movement means comprises;~~

~~first movement means configured to move said cradle through a first plane of movement; and~~

~~second movement means configured to rotate said cradle through a second plane of movement transverse to said first plane of movement.~~

~~According to a fourth aspect of the present invention there is provided a stretching apparatus for use in performing controlled stretching of the muscles and soft tissues associated with the human hip joint, comprising:~~

~~two leg supports each for use in positioning a subject's leg during stretching, each leg support moveable between a stretching and non-stretching position and connected to:~~

~~a leg support movement means, each said leg support movement means having first and second pivots forming first and second axes of rotation, said leg support movement means operable to independently move said connected leg support through corresponding first and second planes of movement,~~

~~wherein movement in said first plane causes a movement of said support in a sagittal plane with respect to a human subject and movement in said second plane causes a rotation of each portion of said support in a coronal plane with respect to a human subject.~~

~~According to a fifth aspect of the present invention there is provided a stretching apparatus for use in performing abduction and/or adduction stretching of a human subject's thigh adductor and/or abductor muscles respectively, comprising:~~

~~at least one cradle configured to support a leg, or part thereof, of said subject such that said leg is held substantially in extended position, said cradle rotatable through a plane of movement; and~~

~~at least one cradle movement means operable to rotate said cradle about an axis of rotation and through said plane of movement so as to move said leg across and/or~~

~~away from a midline of a subject's body to perform adduction and/or abduction stretches of the subject's leg respectively.~~

~~According to a sixth aspect of the present invention there is provided a stretching apparatus for use in performing medial or lateral rotation stretching of a human subject's thigh lateral rotator or medial rotator muscles respectively, comprising:~~

~~at least one cradle configured to support a leg, or part thereof, in a position such that the thigh of the support leg is substantially orthogonal to the subject's upper body, said cradle rotatable about an axis of rotation so as to move a portion of said supported leg in a direction across or away from a midline of the subject's body to perform lateral rotation or medial rotation stretches respectively; and~~

~~at least one cradle movement means operable to rotate said cradle about said axis of rotation.~~

Please delete the following language on page 14, paragraph 3, of the Specification:

Abduction and adduction are movements about a sagittal axis. Abduction is movement ~~away from a mid-sagittal plane~~ in a lateral direction away from a midline of a subject's body which extends generally through the human torso and defining an approximate anatomical line of symmetry between the left and right hand sides of the body. Leg movements during abduction and adduction are therefore away from and across this midline respectively.

Please insert the following language beginning on pages 35 and continuing to page 37, paragraphs 2 and 3, entitled "Stretch 3 – Medial and Lateral Rotation" and "Stretch 4 – Adduction and Abduction" of the Specification, as follows:

Stretch 3 - Medial and Lateral Rotation

The resting leg is maintained supported by a cradle in extended linear position. The stretching leg is raised through a first plane of movement using handle portion 506 and the second and third limb cradle sections are adjusted to be positioned at right angles so as to support the thigh and calf of the stretching leg at approximately 90° in raised position as illustrated in Fig. 1C. This raised position can be maintained by use of the locking ratchet of the respective cradle movement means. The subject is then in position to perform both medial and lateral rotation stretches about the hip joint. Medial rotation stretching is performed by the subject pushing on handle portion 506 to move the handle portion and cradle through a second plane of movement about second bearing set 906. To perform medial rotation stretching of the left leg this rotation will occur in a counter-clockwise direction about second bearing set 906. To perform lateral rotation stretching the subject operates handle portion 506 throughout the second plane of movement in a direction so as to move the stretching leg across the midline of the subject's body. For lateral rotation stretching of the left leg rotation occurs in a clockwise direction about bearing set 906. For both types of stretching the ratchet mechanism on the second bearing set 906 allows the stretch to be maintained in position until the subject desires to release the stretch.

Stretch 4 – Adduction and Abduction

In the resting position the subject operates handle portion 506 to rotate about second bearing set 906 to move a stretching leg either away from the body (abduction) or across the midline of the body (adduction) whilst maintaining the leg in the resting coronal plane, i.e. substantially within the main plane of the subject's body. For abduction stretching of the left leg rotation of the cradle about second bearing set 906 occurs in counter clockwise direction. For performance of adduction stretching the resting leg is moved to a raised and bent position as described in respect of positioning the leg for medial and lateral rotation stretching such that the stretching leg can be moved across the midline of the subject's body without the resting leg interfering with the stretch. The resting leg is supported in the raised and bent position by a respective

cradle. For adduction stretching of the left leg rotation of the cradle occurs about second bearing set 906 in a clockwise direction. For both types of stretching the ratchet mechanism on the second bearing set 906 allows the stretch to be maintained in position until the subject desires to release the stretch.